

AMENDMENTS TO THE CLAIMS

The listing of claims replaces all prior versions and listings of claims in this application.

1. (Currently Amended) A shooting device, comprising:

a shooting unit which shoots [[an]] a physical object as a shooting target, a position of the physical object being movable;

an expected shooting state storing unit which stores expected shooting state information which represents an expected position of the physical object;

a guide determining unit which determines how the physical object is to be guided to the expected position based on the expected shooting state information and an image shot by said shooting unit, said guide determining unit determines whether the physical object should be moved close to said shooting unit or away from said shooting unit by comparing a size of the physical object in the image shot by said shooting unit and a size of the physical object represented by the expected shooting state information;

a guide instruction outputting unit which instructs how the physical object is to be guided to the expected position based on a result of the determination made by said guide determining unit, said guide instruction outputting unit outputs a guidance instruction for moving the physical object close to said shooting unit or moving the physical object away from said shooting unit, based on determination by said guide determining unit; and

an image outputting unit which outputs the image shot by said shooting unit,
wherein:

the physical object possesses a line pattern including lines;

a number of lines or a total length of lines to be shot by said shooting unit is defined as the expected shooting state information; and

said guide determining unit determines that the physical object is not required to be guided, if the number of the lines included in the line pattern possessed by the physical object or the total length of the lines included in the line pattern possessed by the physical object, which is detected from an image of the physical object shot by said shooting unit, is larger than the number of lines or the total length of lines, which is defined as the expected shooting state information.

2. (Currently Amended) The shooting device according to claim 1, wherein:

said guide determining unit determines a direction where the physical object is to be guided.

3. (Withdrawn/Currently Amended) The shooting device according to claim 1, wherein:

the expected shooting state information includes information which represents an expected posture of the physical object; and

said guide determining unit determines a rotation direction where the physical object is to be guided.

4. (Withdrawn/Currently Amended) The shooting device according to claim 1, further

comprising:

an object detecting unit which determines whether or not an image of [[an] a physical object to be shot is included in the image shot by said shooting unit;

an object image storing unit which stores the image shot by said shooting unit as an object image in a case where the image of the physical object is included; and

a background image storing unit which stores the image shot by said shooting unit as a background image in a case where the image of the physical object is not included, wherein

said image outputting unit extracts the image of the physical object based on the object image and the background image, and outputs the extracted image.

5. (Withdrawn/Currently Amended) The shooting device according to claim 1, further comprising:

an object detecting unit which determines whether or not an image of [[an]] a physical object to be shot is included in the image shot by said shooting unit;

an object image storing unit which stores the image shot by said shooting unit as an object image in a case where the image of the physical object is included; and

a background image storing unit which stores the image shot by said shooting unit as a background image in a case where the image of the physical object is not included, wherein

said image outputting unit outputs both the object image and the background image.

6. (Withdrawn/Currently Amended) The shooting device according to claim 4, wherein said guide determining unit guides the physical object in such a way that the image

obtained by said shooting unit includes the physical object if the object image is not stored in said object image storing unit, and guides the physical object in such a way that the image obtained by said shooting unit does not include the physical object if the background image is not stored in said background image storing unit.

7. (Withdrawn/Currently Amended) The shooting device according to claim 1, further comprising:

a measuring unit which measures a distance between said shooting unit and the physical object;

an object detecting unit which determines whether or not an image of [[an]] a physical object to be shot is included in the image shot by said shooting unit based on a result of measurement made by said measuring unit;

an object image storing unit which stores the image shot by said shooting unit as an object image in a case where the image of the physical object is included; and

a background image storing unit which stores the image shot by said shooting unit as a background image in a case where the image of the physical object is not included, wherein

said image outputting unit extracts the image of the physical object based on the object image and the background image, and outputs the extracted image.

8. (Withdrawn/Currently Amended) The shooting device according to claim 1, further comprising:

a measuring unit which measures a distance between said shooting unit and the physical

object;

an object detecting unit which determines whether or not an image of ~~[[an]]~~ a physical object to be shot is included in the image shot by said shooting unit based on a result of measurement made by said measuring unit;

an object image storing unit which stores the image shot by said shooting unit as an object image in a case where the image of the physical object is included; and

a background image storing unit which stores the image shot by said shooting unit as a background image in a case where the image of the physical object is not included, wherein said image outputting unit outputs both the object image and the background image.

9. (Withdrawn/Currently Amended) The shooting device according to claim 7, wherein said guide determining unit guides the physical object in such a way that the image obtained by said shooting unit includes the physical object if the object image is not stored in said object image storing unit, and guides the physical object in such a way that the image obtained by said shooting unit does not include the physical object if the background image is not stored in said background image storing unit.

10. (Currently Amended) The shooting device according to claim 1, wherein said image outputting unit outputs the image shot by said shooting unit if said guide determining unit determines that the physical object is not required to be guided.

11. (Cancelled)

12. (Currently Amended) The shooting device according to claim 1, further comprising a detecting unit which detects a proportion of area of the image in a particular color to a whole area of the image shot by said shooting unit, wherein said guide determining unit determines a direction where the physical object is to be guided based on a result of detection made by said detecting unit.

13. (Withdrawn) A shooting device, comprising:
a shooting unit which shoots an object;
a measuring unit which measures a distance between said shooting unit and the object;
a guide instruction outputting unit which instructs a direction where the object is to be guided based on a result of measurement made by said measuring unit; and
an image outputting unit which outputs the image shot by said shooting unit.

14. (Withdrawn) A shooting device, comprising:

a camera which obtains image data;

an expected shooting state storing unit which stores expected shooting state information which represents an expected shooting state in a case where a background image is shot with said camera;

a guide determining unit which determines a direction or an angle, in or at which said camera is to be guided, based on the expected shooting state information and an image shot by said camera; and

a guide instruction outputting unit which instructs a direction or an angle, in or at which said camera is to be guided, based on a result of determination made by said guide determining unit.

15. (Withdrawn) The shooting device according to claim 14, further comprising

a moving unit which moves said camera in accordance with an instruction output from said guide instruction outputting unit.

16. (Original) The shooting device according to claim 1, wherein

said guide instruction outputting unit comprises a display unit, and displays a character string corresponding to the result of the determination made by said guide determining unit, on said display unit.

17. (Original) The shooting device according to claim 1, wherein

said guide instruction outputting unit comprises a display unit, and displays a graphic or a symbol corresponding to the result of the determination made by said guide determining unit, on said display unit.

18. (Original) The shooting device according to claim 1, wherein

said guide instruction outputting unit outputs voice guidance corresponding to the result of the determination made by said guide determining unit.

19. (Original) The shooting device according to claim 1, wherein

said guide instruction outputting unit generates stereophonic sound corresponding to the result of the determination made by said guide determining unit.

20. (Currently Amended) A method of guiding ~~[[an]]~~ a physical object to be shot with a shooting device, comprising:

shooting ~~[[an]]~~ the physical object as a shooting target with the shooting device, the physical object possessing a line pattern including lines ~~with the shooting device, and~~ a position of the physical object being movable;

determining how the physical object is to be guided based on expected shooting state information, which represents an expected position of the physical object, and an image shot by the shooting device, said determining including determining whether the physical object should be moved close to the shooting device or away from the shooting device by comparing a size of the physical object in the image shot by the shooting device and a size of the physical object represented by the expected shooting state information; and

outputting a guide instruction of how the physical object is to be guided to the expected position based on a result of the determining, said outputting including outputting a guidance instruction for moving the physical object close to the shooting device or moving the physical object away from the shooting device, based on a result of said comparing,

wherein the expected shooting state information is defined as a number of lines or a total length of lines to be shot by said shooting device, and

said determining further comprises determining that the physical object is not required to be guided if the number of the lines included in the line pattern possessed by the physical object or the total length of the lines included in the line pattern possessed by the physical object, which is detected from an image of the physical object shot by said shooting device, is larger than the number of lines or the total length of lines, which is defined as the expected shooting state information.

21. (Currently Amended) A method of shooting ~~[[an]]~~ a physical object with a shooting device, comprising:

a first step of shooting ~~[[an]]~~ the physical object as a shooting target with the shooting device, the physical object possessing a line pattern including lines ~~with the shooting device, and~~ a position of the physical object being movable;

a second step of determining how the physical object is to be guided based on expected shooting state information which represents an expected position of the physical object, and an image shot by the shooting device, said second step of determining including determining whether the physical object should be moved close to the shooting device or away from the shooting device by comparing a size of the physical object in the image shot by the shooting device and a size of the physical object represented by the expected shooting state information;

a third step of outputting a guide instruction of how the physical object is to be guided to the expected position based on a result of the determination, said third step of outputting a guide instruction including outputting a guidance instruction for moving the physical object close to the shooting unit or moving the physical object away from the shooting unit, based on a result of said comparing; and

a fourth step of repeating the first through the third steps until it is determined that the physical object is not required to be guided,

wherein the expected shooting state information is defined as a number of lines or a total length of lines to be shot by said shooting device, and

said second step of determining further comprises determining that the physical object is

not required to be guided if the number of the lines included in the line pattern possessed by the physical object or the total length of the lines included in the line pattern possessed by the physical object, which is detected from an image of the physical object shot by said shooting device, is larger than the number of lines or the total length of lines, which is defined as the expected shooting state information.

22. (Currently Amended) A shooting device, comprising:

shooting means for shooting ~~[[an]]~~ a physical object as a shooting target, a position of the physical object being movable;

storing means for storing expected shooting state information which represents an expected position of the physical object;

guide determining means for determining how the physical object is to be guided to the expected position based on the expected shooting state information and an image shot by said shooting means, said guide determining means determines whether the physical object should be moved close to said shooting means or away from said shooting means by comparing a size of the physical object in the image shot by said shooting means and a size of the physical object represented by the expected shooting state information;

guide instruction outputting means for instructing how the physical object is to be guided to the expected position based on a result of the determination made by said guide determining means, said guide instruction outputting means outputs a guidance instruction for moving the physical object close to said shooting means or moving the physical object away from said shooting means based on the determination by said guide determining means; and

image outputting means for outputting the image shot by said shooting means,
wherein:

the physical object possesses a line pattern including lines;

a number of lines or a total length of lines to be shot by said shooting means is defined as the expected shooting state information; and

said guide determining means determines that the physical object is not required to be guided, if the number of the lines included in the line pattern possessed by the physical object or the total length of the lines included in the line pattern possessed by the physical object, which is detected from the image of the physical object shot by said shooting means, is larger than the number of lines or the total length of lines, which is defined as the expected shooting state information.